REMARKS

As an initial matter, the undersigned thanks Dr. VanderVegt for courtesies extended during a telephone conference on August 5, 2004.

As a further preliminary matter, it is noted that the PTO-1449 forms attached to the outstanding Office Action dated July 1, 2003 (Paper 13) were not initialed by the Examiner. Thus, it is not clear if the USPTO has had the chance to consider the cited references. To address the issue, the Examiner is respectfully requested to send the undersigned initialed copies of the PTO-1449 forms indicating that the references have been considered. If copies of any of the references are required, the undersigned will be happy to send them to the Examiner promptly on request.

To assist Dr. VanderVegt, this submission includes a copy of the PTO-1449 form sent with the July 1, 2003 Office Action. If he could fax an endorsed copy to the below noted facsimile number or otherwise mail the copy, the undersigned would be most grateful.

Claims 51-54 and 56-60 are pending. Claim 51 has been amended with language from claim 55 (now canceled).

New claim 61 consists of language from claims 51, 55 and 60.

No new matter has been added by virtue of the amendments or new claim.

35 USC §103 (Obviousness)

1. At pgs. 2-3 of the Action, claims 51, 54, and 60 stand rejected as being unpatentable over US Pat. No. 5,260,422 to Clark in view of McCluskey et al. (*J. of Immunol.* 141: 1451 (1988). While Applicants respectfully disagree with the position taken for reasons already of record, basis for the rejection has been addressed.

In particular, claim 55 (now canceled) was not subject to the rejection over the cited Clark and McCluskey references. Claim 51 has been amended with language from claim 55. Accordingly, there is no basis of record for rejecting remaining claims including 54 and 60 as obvious. Reconsideration and withdrawal of the rejection are requested.

2. At pg. 4, claims 52 and 53 stand rejected as obvious over US Pat. No. 5,260,422 to Clark in view of McCluskey et al. (*J. of Immunol.* 141: 1451 (1988) in further view of WO 93/10220. Applicants respectfully disagree. However, basis for the rejection has been addressed as follows.

Claim 51 (from which claims 52 and 53 depend) has been amended with language from canceled claim 55. Claim 55 was not subject to the rejection formulated by the Office. Accordingly, there should be no further basis for rejecting claims 52 and 53 on grounds currently set forth by the Office. Reconsideration and withdrawal of the rejection are requested.

3. At pgs. 4-5 of the Action, claims 55-59 stand rejected as being unpatentable over the Clark and McCluskey reference already mentioned in further view of US Pat. No. 5,338,532 to Tomalia. Applicants respectfully disagree as follows. The rejection is addressed with respect to amended claim 51 which now includes language from canceled claim 55.

As cited, none of the Clark, McCluskey and Tomalia references teach how to genetically modify an MHC complex to produce chains sufficient for chemically producing the claimed multivalent fusion complex. Although Clark provides some information about changing certain

MHC molecules to bind toxin or label (col. 6, lines 40-60), none of that information suggests that one could use the technique to bind larger entities (eg., dendrimers) while retaining activity. Neither McCluskey or Tomalia remedies this defect.

Further, the Office cites Tomalia at col. 9, lines 23-54 for the position that it "discloses use of dendrimers as carriers for immuno-potentiating agents". Tomalia as cited does not define "immuno-potentiating agents" however the list of agents are certainly not MHC molecules or are they related. See col. 9, lines 26-27 (citing antigen, hapten, organic moiety or organic or inorganic compounds). Implicit in the rejection is the an MHC molecule is an "immuno-potentiating agent". However nowhere in the reference as cited does Tomalia make or suggest this equivalence.

In fact, Tomalia's "immuno-potentiating agents" as cited by the Office at lines 23-54 are very small in comparison to an MHC molecule. Such agents as relied on are not MHC molecules. There is no teaching or suggestion in Tomalia or the other cited references that MHC molecular are "immuno-potentiating agents" and that one could substitute one for the other without risking MHC activity.

For all these reasons, withdrawal of the rejection is requested.

Applicant disagrees with the rejection on further grounds.

For instance, McCluskey teaches light thiolation and covalent coupling of certain MHC molecules to dextran at pg. 1422, col. 2. Reactive thiol groups are thus non-specifically added throughout his molecules. The reference also teaches use of CNBR-activated agarose to link certain MHC molecules to the beads. These reactions are understood to be relatively non-specific resulting in binding throughout the MHC molecule. In contrast, the claimed invention is genetically modified to control reaction to terminal amino acids. It thus avoids the pitfalls of

McCluskey by focusing reaction at the terminus, thereby sparing the binding region from modification. None of Tomalia or Clark as cited teaches or suggest doing this for making multivalent MHC molecules.

In view thereof, reconsideration and withdrawal of the instant obviousness rejection are requested.

Applicants submit that all claims are allowable as written and respectfully request early favorable action by the Examiner. If the Examiner believes that a telephone conversation with Applicants' attorney would expedite prosecution of this application, the Examiner is cordially invited to call the undersigned attorney of record.

Although it is not believed that any further fee is needed to consider this submission including all papers attached hereto, the Office is authorized to charge deposit account no. **04-1105** should such a fee be deemed necessary.

Respectfully submitted,

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